

Remarks:

Claims 44-47, 55-58, 62-65, 120-123, and 139-150 are currently pending. Claims 44, 55, 62, 120, 147, 148, 149, and 150 are independent. Claims 44, 46, 47, 55-58, 62-65, and 120 have been amended. In the Office Action of January 10, 2005, claims 55-58, 62-65, and 120-123 were rejected under 35 U.S.C. § 112, first paragraph, because the subject matter therein was allegedly not described sufficiently. Specifically, the language of the above claims that reference sequences that are homologous to SEQ ID NO: 14 were objected to because these sequences allegedly did not "meet the written description provision of 35 USC 112, first paragraph" (Office Action, p. 1, ¶5) and therefore, the specification did not convey to those of skill in the art that applicants had possession of the claimed invention.

Claim 55 has been amended to define the DNA sequence as " coding for a protein which renders cell lines that, prior to transformation were non-susceptible to PRRSV infection, susceptible to PRRSV infection or increases susceptibility to PRRSV infection in cell lines that were susceptible to PRRSV infection prior to transformation." Support for this amendment may be found on page 9, lines 27-29 as well as page 10, lines 21-28. Claim 62 has been amended to define the DNA sequence as "coding for a tetraspan protein having RNA binding activity with the 3' UTR of PRRSV isolates." Support for this amendment may be found on page 13, lines 28-31. Claim 120 has been amended to define the DNA sequence as "for CD 151 protein, or a protein having the same functions as CD151 protein " Support for this amendment can be found generally in the summary of the invention, where SEQ ID No. 14 is identified as coding for CD 151, for example on page 12, lines 14-24. These amendments clearly indicate that the claims are limited to DNA sequences that code for a protein with the same functions as CD 151.

Additionally, the present application clearly defines the protein that is being encoded by any

DNA sequence. Accordingly, Applicants can be said to be in possession of the genus of DNA sequences encoding the protein. This is because "in the molecular biology arts, if an applicant disclosed an amino acid sequence, it would be unnecessary to provide an explicit disclosure of the nucleic acid that encoded the amino acid sequence. Since the genetic code is widely known, a disclosure of an amino acid would provide sufficient information such that one would accept that an applicant was in possession of the full genus of nucleic acids encoding a given amino acid sequence." In re Wallach, 378 F.3d 1330, 1334 (Fed. Circ., 2004) *quoting* MPEP § 2163.II.A.3.a.ii. Thus, Applicants submit that limiting the claims to the specific sequences would unduly limit the rightful scope of the claims. If such a limitation is applied, then those of skill in the art can modify a single nucleotide or amino acid to create a protein that retains all of the functions of CD 151 protein, but possibly avoid infringement. The present claims, as amended, provide scope in line with what the Applicants deserve and are now in accordance with 35 U.S.C. § 112. Accordingly, applicants assert that this objection has been overcome.

Claims 44-47 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter. Specifically, it was alleged that the term "CD 151" was not clearly defined. Claim 44, from which claims 46 and 47 depend, has been amended to recite "A transformed cell line containing DNA coding for CD 151 protein, or for a protein having the same functions as CD151." This provides further specificity of what claims 44-47 cover. Additionally, Applicants submit that the term "CD 151" is clearly defined in light of the application disclosure and the interpretation of one possessing ordinary skill in the art.

"Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; ... and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was

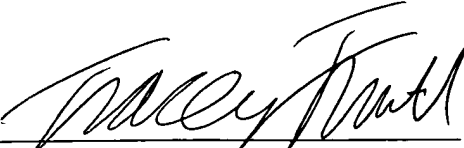
made.” MPEP § 2173.02. Applicants submit that CD 151 is clearly defined in light of the application. CD 151 is defined in the specification as being a designation for the tetraspan molecule Platelet Endothelial Tetraspan Antigen-3 on page 13, lines 30-31. CD 151 is further clarified as being an RNA binding protein on the surface of animal cells (page 14, lines 4-5). Furthermore, the preferred variations of genomic DNA coding for CD 151 are clearly defined on page 12, line 14 through page 13, line 3 of the present application, where the preferred embodiments of the invention are described as those proteins derived from DNA sequences that share at least an 84% sequence homology with SEQ ID NO: 14. Applicants submit that in light of the context of the application and in light of the clear definition in the specification, one of ordinary skill in the art would have no difficulty ascertaining what is meant by the term “CD 151.” Additionally, Applicants have enclosed a Declaration by Dr. Carol R. Wyatt, who is a person of skill in the field of the present invention. In her Declaration, Dr. Wyatt asserts that the term "CD 151" is well known by those of skill in the art in the field of immunology. Additionally, Dr. Wyatt points out that the definition of CD 151 as described in the present application accords with the general understanding of those of skill in the art. Accordingly, Applicants assert that the objection to claims 44-47 under 35 U.S.C. § 112, second paragraph has been overcome.

The undersigned would like to thank the Examiner for her time and graciousness in the interview of March 8, 2005. It is believed that all of the amendments presented in this amendment are in accordance with what was discussed in the interview. If the Examiner has any questions, please feel free to contact the undersigned at the number listed below.

In light of the foregoing, the present application should now be in condition for allowance and a Notice of Allowance is courteously solicited.

Any additional fee due in connection with this amendment should be applied against Deposit  
Account 19-0522.

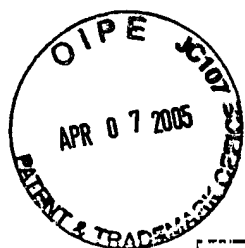
Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Docket No. 30921-CIP
KAPIL, Sanjay et al.	
Serial No. : 10/058,597	Group Art Unit No. 1637
Filed: January 28, 2002	
IDENTIFICATION AND APPLICATIONS OF PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME VIRUS HOST SUSCEPTIBILITY FACTOR(S) FOR IMPROVED SWINE BREEDING AND DEVELOPMENT OF A NON-SIMIAN RECOMBINANT CELL LINE FOR PROPAGATION OF THE VIRUS AND A TARGET FOR A NOVEL CLASS OF ANTIVIRAL COMPOUNDS	Examiner: TUNG, Joyce

Commissioner for Patents  
Alexandria, VA 22313-1450

Sir:

DECLARATION

I, DR. CAROL R. WYATT declare and state as follows:

1. I have been an Associate Professor at the College of Veterinary Medicine in the Department of Diagnostic Medicine and Pathobiology at Kansas State University since 2000. I received my MS in Microbiology from University of Kentucky in 1973 and my Ph.D. in Veterinary Science with a specialization in Immunology and Immunopathology from Washington State University in 1986.

2. This declaration is being submitted in order to establish what the term "CD 151" means to those of skill in the art.

3. The term "CD 151" is well known by those of skill in the art in the field of immunology as a Cluster of Differentiation antigen. Cluster of Differentiation antigens are molecules that are recognized internationally by the International Union of Immunological

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Societies. This nomenclature was designated at the 1<sup>st</sup> to 7<sup>th</sup> Workshops on International Human Leukocyte Differentiation Antigens.

4. At page 46, beginning at line 18, the present application notes that CD 151 is a transmembrane glycoprotein belonging to the tetraspanin or transmembrane 4 superfamily of cellular proteins. It is my opinion that this definition is accurate and that others of skill in the art would agree that this definition is accurate.

5. Accordingly, "CD 151" is very specific term with an unambiguous meaning to those of skill in the art.

6. I further declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true, and further that those statements were made with the knowledge that willful, false statements and the like are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and such wilful false statements may jeopardize the validity of any patents issued from the patent application.

Date: 4-7-05

Carol R. Wyatt  
Carol R. Wyatt